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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/343,517	06/30/1999	ROBERT BURNETT	A7489	8018

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EXAMINER

FERRIS, DERRICK W

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 02/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/343,517

Applicant(s)

BURNETT, ROBERT

Examiner

Derrick W. Ferris

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. **Claims 1-23** as amended are still in consideration for this application.
2. Examiner **withdraws** the 112-second paragraph rejection for claims 1 and 2 for Office action dated 9/6/02 since applicant is correct in that applicant is allowed a broad interpretation of the claims. At the same time, examiner would like to remind applicant that examiner is also allowed a reasonable but broad interpretation of the recited claimed subject matter. This is especially pertinent with respect to applicant's second remark on page 6, line 21 of Applicant's Remarks with respect to "selective" routers. As disclosed later, examiner's view of "selective" may differ from applicants.
3. Examiner does **not withdraw** the obviousness rejection to *Mazzola* in view of *Katz et al.* Applicant's arguments filed 16/6/02 have been fully considered but they are not persuasive.

With respect to **claims 1, 9, 15, and 17** at first issue is the motivation for combining the two references mentioned on page 6, lines 14-19. Examiner places emphasis on page 5, lines 7-9 of Office action dated 9/16/02 for this motivation. For further emphasis, examiner notes applicant's invention is geared towards obviating the deficiencies mentioned in applicant's Background by "tunneling management information data and other information to and from remotely located IP NEs via the SONET DCC". How does applicant accomplished this? By placing IP over the Connection Less Network Protocol (CLNP) or simply put "the placement of IP over CLNP" and as broadly claimed in applicant's independent claims [Emphasis Applicant's Summary on pages 2-3]. *Katz* also discloses network management and CLNP. Specifically *Katz* discloses that SNMP can operate over either IP or CLNP in the environment proposed by *Katz*

Art Unit: 2663

[page 45, first column under the section “Network Management”]. Should motivation still be at issue, examiner has further clarified the motivational statements provided in the obviousness rejection below. At second issue is “selective” routers such as mentioned in claim 1, line 4. Examiner notes a reasonable but broad interpretation of “selective” routers in that a host may or may not be TUBA capable (i.e., a host is selective on whether TUBA is implemented on a host or not). At third issue is the “co-existence” of two protocols of which examiner places emphasis on the claim language of dependent claim 3 “wherein the overlaid IP interface co-exists with said second communications protocol in said local gateway ...” [claim 3, lines 3-4]. *Katz* on pages 45 (in the Section entitled “Transition Overview”) discloses two types of devices: IP only devices (i.e., a first IP device) and TUBA-capable hosts (i.e., a router). Specifically, the reference discloses that IP only devices talk only to IP and TUBA-capable hosts use IP to talk to IP only devices and CLNP to talk to other TUBA-capable hosts [Emphasis page 45, second column first few lines]. So “yes” the two protocols can “co-exist” as defined by applicant in claim 3 using a broad but reasonable interpretation of the claimed subject matter. In other words, at issue is what is meant by “co-exist” and “running over” as broadly claimed by applicant since technically IP cannot run over CLNP since they both operate at a network layer (i.e., layer 3). Hence a skilled artisan recognizes that IP and CLNP can “co-exist” with one another which is taught by *Katz* (i.e., IP only hosts talk to other IP only hosts, and CLNP hosts talk to both other CLNP hosts and other IP only hosts since CLNP hosts have a dual stack as shown in figure 10 and pointed out by applicant creating a “selective” environment). The key with respect to applicant’s comment on running both IP and CLNP over the same path is improper [Applicant’s Remarks on page 7]. The reference specifically teaches that “TUBA-capable hosts use IP to talk to IP-only hosts, but

Art Unit: 2663

they use CLNP when talking to other TUBA-capable hosts” thus creating an efficiency [*Katz* page 45 second column lines 2-4]. Now with respect to “running over”, it is well known in the art that CLNP can “run over” SONET-OSI (e.g., this is taught by *Mazzola*). Thus examiner asserts a prima facie case of obviousness that an IP only device (e.g., a first device) communicates with a TUBA host (since a TUBA host can communicate with an IP only device since it has a dual stack as shown in figure 10), this TUBA host (i.e., a router) communicates with other TUBA hosts using CLNP where CLNP travels over SONET by way of SONET-OSI.

With respect to **claims 3, 10, and 15**, at first issue is examiner’s choice of language used in the rejection. Examiner will be more than happy to re-phase the wording used in the rejection. At second issue is the use of tunneling by providing a unique address to identify the remote router (i.e., the criteria for establishing a tunnel as broadly defined by applicant is the use of a unique address). Examiner asserts this is taught by *Mazzola* in column 2, lines 44-45. Specifically a unique NSAP address is used to create a “tunnel” using a broad but reasonable interpretation of the claimed subject matter. With respect to routing a message, examiner places emphasis on column 3, lines 26-32. What happens when a network element receives a message to a network not in its database (i.e., a non-neighbor network)? Well it passes the message along in accordance to a predetermined algorithm as is well known in the art. In reference to CLNP this well known algorithm is mentioned in *Katz* with respect to Routing between Hosts and Routers starting on page 41.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2663

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,461,624 to *Mazzola* in view of "TUBA: Replacing IP with CLNP" by *Katz et al.*

As to the claims in general (and particularly **claims 1-2, 5-9, 12-14, 16-17, and 20-23**) the following is noted in applicant's Summary:

"The present invention obviates the above deficiencies of the known techniques by tunneling management data and other information to and from remotely located IP NEs via the SONET DCC by placing IP over the Connection Less Network Protocol (CLNP) that is present in OSI" [Applicant's specification pages 2-3].

Figures 4a and 4b of *Mazzola* illustrate block diagrams of an IS circuit pack and an ES/IS circuit pack, respectively. For illustrative purposes, the block diagrams are specific for a SONET application; however, the method disclosed in a patent may be used in connection with other protocols as well (e.g., an IP interface) [column 5, lines 7-25]. As shown in the diagram, the Connection Less Network Protocol (CLNP) is running over SONET (e.g., SONET-OSI) at the network layer. Not shown in the diagram is overlaying an IP interface (i.e., a first protocol) over a second communications protocol (e.g., SONET-OSI as defined in claim 6). Examiner points out to applicant that one cannot compare IP with SONET as they are two different layers using the OSI reference model (IP is layer 3 at the network layer, and SONET is layer 1 or the physical layer). Hence it assumed when applicant refers to SONET-OSI as the second communications protocol, applicant is really referring to CLNP running over SONET when trying to compare an IP interface with SONET with respect to routing at the network layer in reference to applicant's

Art Unit: 2663

statement in applicant's Summary since as taught by the art (e.g., *Mazzola*) CLNP is known to run over SONET (i.e., SONET-OSI).

Examiner notes that it would have been obvious to a skilled artisan prior to applicant's invention to route IP "over" CLNP where CLNP can be run over SONET-OSI. *Katz et al.* provides this relationship and thus provides the motivation by not only mapping IP and CLNP but also providing a mechanism for routing the two protocols [page 38] using an approach called TCP and UDP with Bigger Addresses (TUBA). Examiner notes *Katz et al.*'s motivation for doing so is due to problems with Internet growth and IP addressing. Shown in Figure 10 [page 45] is the network stack for routing the two protocols. Shown in Figure 8 is interarea routing for CLNP using IS-IS at the core and ES-IS at the edge. Furthermore, *Mazzola* also discloses routing for SONET/CLNP using ES-IS [column 1, lines 20-25]. Thus in summary, *Mazzola* discloses CLNP running over SONET-OSI (as is known in the art) and *Katz et al.* discloses IP running over "CLNP" thus IP can "run" over CLNP which runs over SONET-OSI. It would have been furthermore obvious to implement this knowledge over a set of routers in a network forming both a local gateway and a remote gateway as is well known in the art given a reasonable but broad interpretation of the claimed subject matter, and based on the examples provided by both references (e.g., shown in figure 2a of *Mazzola* and figure 6 of *Katz et al.*). Again, the motivation being that the Internet consists of more than one router as is well known in the art which forms local and remote gateways respectively (which could be directly or not directly attached) for a local and remote host.

As to **claims 3, 4, 10 and 15 specifically**, since the data is routed using CLNP, and a tunnel is created using a reasonable but broad interpretation of the claimed subject matter. In

Art Unit: 2663

addition, both *Mazzola* and *Katz et al.* disclose NSAP addressing. Examiner notes that EI-IS and IS-IS contain routing table(s). Furthermore, *Katz et al.* discloses mapping IP to NSAP addressing [pages 40-41]. As IP can be replaced by CLNP it is possible for the two to coexist.

As to **claims 18 and 19 specifically**, *Katz et al.* discloses network management using SNMP [page 45]. Although a network administrator per se is not clearly mentioned, examiner notes it would have been obvious for a skilled artisan prior to applicant's invention to recognize that a network administrator can use SNMP based tools for configuring or maintaining information about the network. In addition, examiner notes that it is possible to obtain both the network address as well as the IP device address using standard network layer diagnostic tools as is well known in the art [*Katz et al.* page 45].

As to **claim 11**, with respect to a network manager, *Katz. et al.* discloses being able to operate a broadcast query between both CLNP and IP thus making a broadcasting possible between the two protocols. In addition, routing between hosts and routers is also disclosed [page 41]. Hence examiner notes it would have been obvious for a skilled artisan to receive a response back from either a host (e.g., a second IP device) or a router (e.g., a router connected to the second IP device).

Mazzola discloses a method for distributing routing between network elements for CLNP. *Katz et al.* provides mapping IP to CLNP. As both references revolve around CLNP there exists a motivation for combining the subject matter as a whole for both references for the purpose of making this rejection.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (703) 305-4225. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (703) 308-5340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 305-3900.


Application/Control Number: 09/343,517

Art Unit: 2663

Page 9

DWF 
February 13, 2003

Derrick W. Ferris
Examiner
Art Unit 2663


MELVIN MARCELO
PRIMARY EXAMINER